



PATENT ABSTRACTS OF JAPAN

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H01P 3/16(21) Application number: **09107862**(71) Applicant: **KYOCERA CORP**(22) Date of filing: **24.04.97**(72) Inventor: **UCHIMURA HIROSHI****(54) DIELECTRIC LINE****(57) Abstract:**

PROBLEM TO BE SOLVED: To facilitate high volume production of a transmission line which is usable for a multi-layered substrate or semiconductor package through a lamination technology by providing two arrays of a via hole conductor groups in a signal transmission direction at an interval less than a half wavelength of a signal to be transmitted by inserting them into a base body where a low- dielectric-constant and a high-dielectric-constant layer are laminated, and electrically connecting them.

SOLUTION: The base body 10 of this dielectric line comprises the low- dielectric-constant layers 1a and 1c and high-dielectric-constant layer 1b. Then the via hole conductors 3 are arranged at the interval (c) in the signal transmission direction X and the interval (c) is less than half as large as the wavelength of the signal to be transmitted through the high-dielectric-constant layer. Further, the via hole conductors 3 are inserted into the base body 10 in the lamination direction to form groups A and B of the via hole conductors 3 in two arrays in the signal transmission direction X. A couple of beltlike conductor layers 2 which are formed on the top surface of the base body 10 are electrically

connected to end parts of the via hole conductors 3 appearing on the top surface of the base body 10.

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